January 29, 2010
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Bureau
Endangered Species Coordinator
Native Species Coordinator, Fisheries Division
Missoula Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Montana Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Wayne Hadley, 1016 Eastside Road, Deer Lodge, MT 59722
Montana River Action, 304 N 18th Ave., Bozeman, MT 59715
Montana Department of Natural Resources and Conservation
Bitterroot Conservation District, 1709 North First Street, Hamilton, MT 59840
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Bitter Root Chapter Trout Unlimited, 701 N 7th Street, Hamilton, MT 59840
Bitterroot National Forest, 1801 North First Street, Hamilton, MT 59840
Tin Cup County Water and Sewer District, P.O. Box 292, Darby, MT 59829
The Montana Water Trust, 140 S. 4th Street West, Unit 1, Missoula, MT 59801

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment (EA) prepared for the Future Fisheries Improvement Program. The program tentatively proposes to provide partial funding to re-habilitate the dam on Tin Cup Creek Lake in order to enhance in-stream flow in Tin Cup Creek, a tributary to the Bitterroot River. The project would involve re-building the dam that was partially breached in 1998 to provide additional water for irrigation purposes and to provide an additional 400 acre-feet of water for use as in-stream flow. This water would provide additional in-stream flow between August 1 and September 30 for a period of 99 years. The Montana Water Trust would purchase this water from the Tin Cup County Water and Sewer District for the purpose of enhancing in-stream flow in Tin Cup Creek. This environmental assessment is addressing only the action of providing partial funding to complete the dam rehabilitation. The Bitterroot National Forest is addressing other actions required for completion of this project, including an evaluation of access/tools options to a wilderness lake and a biological assessment of all connected actions on potential affects to bull trout, a species listed as threatened under the

Endangered Species Act. Tin Cup Lake is located about 12 miles southwest of the community of Darby in Ravalli County.

Please submit any comments that you have by 5:00 P.M., March 3, 2009 to Montana Fish, Wildlife & Parks in Helena at the address listed above. The funding for this project through the Future Fisheries Improvement Program is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Section
Fisheries Bureau
e-mail: mlere@mt.gov

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife & Parks
Tin Cup Creek In-stream Flow Enhancement Project

General Purpose: The 1995 Montana Legislature enacted sections 87-1-272 through 273, MCA that directs the Montana Fish, Wildlife and Parks (FWP) to administer a Future Fisheries Improvement Program. The program involves providing funding for physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. The program calls for the enhancement of bull trout and cutthroat trout through habitat restoration, natural reproduction and reductions in species competition by way of the Future Fisheries Program.

Tin Cup Creek is a tributary to the Bitterroot River that supports a mixed salmonid fishery, including bull trout. The stream currently suffers from dewatering due to irrigation withdrawals. Tin Cup Lake, a small irrigation storage reservoir located in the wilderness headwaters, has the potential for providing additional in-stream flow to the creek. However, the dam on the lake was partially breached in 1998, and, as a result, the reservoir currently is operating at only one half capacity. This project calls for providing partial funding to help repair the dam. In turn, the Montana Water Trust, a private entity founded to create cooperative solutions to chronic dewatering of Montana's rivers and streams, will purchase 400 acre-feet of this additional stored water per year for 99 years from the water rights owners to enhance flow in Tin Cup Creek The project site is located about 12 miles southwest of the community of Darby in Ravalli County.

I. Location of Project: This project involves enhancing stream flow in the entire length of Tin Cup Creek (14 miles of stream). Tin Cup Lake is located in Township 2 North, Range 23 West, Section 1 in Ravalli County (Attachment 1).

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year operations plan for the fisheries program is to "restore and enhance degraded fisheries habitats" by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on private and public lands. This proposed project would help meet this goal.

Tin Cup Creek supports genetically pure bull trout, hybrid bull trout/brook trout and hybrid westslope cutthroat trout/rainbow trout, as well as brook trout, brown trout, longnose dace and slimy sculpin. Until relatively recently, Tin Cup Creek typically would not remain connected to the Bitterroot River during the irrigation season due to an over-appropriation of water rights. A relatively recent water lease now managed by the Montana Water Trust, which is associated with the senior most and down stream most water right on the Waddell Ditch, currently provides for about 4.3 cubic feet per second (cfs) of in-stream flow through 2015. The wetted perimeter methodology for determining minimum in-stream flow ascertained that the lower reaches of the stream require between 7.5 to 10 cfs to maintain optimal riffle habitat. Tin Cup Lake, if refurbished, has the potential for providing additional flow to the stream to meet these optimal conditions. Currently, the reservoir is operating at only one half capacity, storing about 912 acre-feet. Reconstructing the dam on Tin Cup Lake would increase the storage capacity of the lake to approximately 2,000 acre-feet and provide an additional 3 cfs of in-stream flow to Tin Cup Creek between August 1 and September 30 of each year. This additional flow, in combination with the existing water

lease, would allow stream flow to approach optimal minimum in-stream flow levels as determined by the wetted perimeter methodology. Additionally, the refurbished dam would provide for an increase in the irrigation storage capacity to be used by the Tin Cup County Water and Sewer District (TCCWSD).

III. Scope of the Project:

The purpose of this project is to secure additional water for in-stream flow purposes in Tin Cup Creek, as well as increase irrigation water storage capacity in Tin Cup Lake for the TCCWSD. The project calls for repairing the dam breach on Tin Cup Lake to return the reservoir to its historic storage capacity of 2000 acre-feet. The reconstruction project would involve refurbishing the dam structure and spillway. As an initial part of this project, a satellite control flow gate was installed on the dam in 2009 to provide the water users an efficient way to conserve and manage water releases from the reservoir. Preliminary designs for the dam refurbishment are presented in Attachments 2 through 5. In turn, the Montana Water Trust would enter into an agreement with TCCWSD to allocate 20% of their stored water capacity (approximately 400 acre-feet) annually for 99 years for the purpose of in-stream flow. The agreement would provide 400 acre-feet of water for in-stream purposes between August 1 and September 30 of each year, totaling 39,600 acre-feet of water for the duration of the project. This water would add approximately 3 cfs to Tin Cup Creek and would be protected from further diversion down to the Waddell Ditch/Headgate, the most senior and lowermost ditch on the stream. The Waddell Ditch also is the location associated with the existing water lease managed by the Montana Water Trust and is where the Montana Water Trust currently measures and monitors their existing lease. This site also would be where they would monitor the stored water purchase.

The purchase agreement would not be perfected until completion of the dam refurbishment and upon approval of a water right change (change of use) by the Department of Natural Resources and Conservation. The project also is contingent upon an environmental evaluation and decision by the Bitterroot National Forest to allow access into a designated wilderness area for the construction work. Tin Cup Lake is located within the boundaries of the Selway-Bitterroot Wilderness Area.

The Future Fisheries Improvement Program is proposing to contribute up to $100,000 towards refurbishing the dam on Tin Cup Lake. Reconstruction of the dam is estimated to cost $450,000. The Montana Water Trust would provide $300,000 in association with the “water purchase” agreement with TCCWSD. These water purchase dollars in turn would be used to help offset the cost of construction.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial & aquatic life and habitats.

Enhancing in-stream flow in Tin Cup Creek using 400 acre-feet of stored water from Tin Cup Lake would be sufficient to meet optimal minimum flow levels as determined by the wetted perimeter methodology. As a result, habitat for all aquatic organisms would be enhanced.

2. Water quality, quantity & distribution.

Refurbishing the dam on Tin Cup Lake would result in storing an additional 1,000 acre-feet of water in the drainage. This water would be stored during periods of higher flow and would be released during periods of lower flow. As a result, the distribution of the hydrograph would change, where peak flows would be slightly dampened and late summer base flows would be slightly increased. Approximately 600 acre-feet of the additional stored water would be available to the water users for irrigation. Approximately 400 acre-feet of the additional stored water would be available for in-stream flow purposes for the period August 1 through September 30.

Water quality would not be adversely affected by work associated with refurbishment of the dam because a portion of the work would be constructed in the dry and a portion would be dewatered behind installed cofferdams. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota (318 authorization). A 124 permit (Montana Stream Protection Act) will be obtained from Montana Fish, Wildlife and Parks and the U.S. Army Corp of Engineers will be contacted to determine the need to meet 404 provisions of the Clean Water Act.

3. Geology & soil quality, stability & moisture.

Soils will be disturbed in and around the proposed borrow areas and spillway improvement zone (Attachment 6).

4. Vegetation cover, quality & quantity.

Vegetative, primarily non-native grasses, will be disturbed in and around proposed borrow pit areas, spillway improvement zone, helicopter landing zone and camp area (Attachment 6).

5. Aesthetics.

In the short term, aesthetics would be adversely affected due to ground disturbance and the presence of construction equipment.

7. Unique, endangered, fragile or limited environmental resources.

Tin Cup Lake lies within the Selway-Bitterroot Wilderness Area. The potential environmental and social consequences of various options for accessing the site and undertaking the proposed construction activities will be addressed in a separate assessment being prepared by the Bitterroot National Forest.

Tip Cup Creek supports westslope cutthroat trout, a species of special concern in Montana, and bull trout, a species listed as threatened under the Endangered Species Act. Improving late summer low flow conditions in the stream is expected to enhance both of these species of fish. Because Tin Cup Creek supports bull trout, a listed species, the project will be included in Montana Fish, Wildlife and Parks Section 6 conservation plan with the U.S. Fish and Wildlife Service.

9. Historical & archeological sites.

This site has previously been disturbed by frequent maintenance of the dam structure, including breaching a portion of the dam in 1998 and the construction of a satellite controlled outlet gate in

2009. As a result, there is a very low likelihood that cultural properties will be impacted by the completion of the proposed project. Should cultural materials be inadvertently discovered during the project, the State Historic Preservation Office will be contacted and the site will be investigated.

VI. Explanation of Impacts on the Human Environment.

3. Agricultural or industrial production.

Refurbishing the dam at Tin Cup Lake would return the storage capacity of the lake to historic levels, more than doubling the current amount of stored water. Eighty percent of this additional stored water would be used downstream to irrigate cropland, likely resulting in an increase in overall production.

7. Access to & quality of recreational and wilderness activities.

Tin Cup Lake lies within the Selway-Bitterroot Wilderness Area. Permission must be provided by the Bitterroot National Forest to obtain motorized access (helicopter) and undertake the proposed construction activities. The Bitterroot National Forest is undertaking an environmental analysis of this decision process using a minimum tools investigation and completion of a biological assessment.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, minimum in-stream flow in Tin Cup Creek would remain below optimal during the late summer season and the aquatic habitat in the stream would remain below potential. Additionally, water users associated with TCCWSD would continue to operate their irrigation systems with less water than they used prior to the dam breach in 1998. As a result, cropland production likely would remain reduced.

2. The Proposed Alternative

The proposed alternative would provide and additional 400 acre-feet of water for use as in-stream flow in Tin Cup Creek during the late summer season for 99 years. This additional water would allow optimal minimum in-stream flows to be met in all years during the life of the project. Maintaining optimal stream flow during the late summer season is expected to benefit all aquatic life. Additionally, restoring the storage capacity of Tin Cup Lake would provide additional irrigation water for users associated with the TCCWSD and is expected to improve cropland production.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment. As part of the proposed water purchase, the Montana Water Trust, in association with TCCSWD, would need to apply for a change in water use

with the Montana Department of Natural Resources and Conservation (DNRC). DNRC would then need to prepare an environmental assessment as part of their decision making process. Additionally, the Bitterroot National Forest will need to prepare an environmental assessment as part of their decision for providing access into the Selway-Bitterroot Wilderness Area.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The Fish, Wildlife and Parks Commission also will review the proposed project and the funding will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA also will be published on Montana Fish, Wildlife and Parks webpage: **www.fwp.mt.gov/publicnotices**

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on March 3, 2010.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Montana Fish, Wildlife and Parks
Fisheries Bureau
Habitat Protection Section
1420 East 6th Avenue
Helena, MT 59620-0701
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MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title: Tin Cup Creek In-stream Flow Enhancement Project
Division/Bureau: Fisheries Bureau -Future Fisheries Improvement Program
Description of Project: Montana Fish, Wildlife and Parks is proposing to provide partial funding to refurbish the dam on Tin Cup Lake. In turn, the Montana Water Trust will purchase 400-acre-feet of stored water in the lake for 99 years to enhance in-stream flow in Tin Cup Creek. The intent of the project is to improve aquatic habitat in the stream and enhance the fisheries, including bull trout. The project site is located approximately 12 miles southwest of the community of Darby in Ravalli County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production			X			X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities					X	X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction: US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office, Bitterroot National Forest, Montana Department of Natural Resources and Conservation

Individuals or groups contributing to this EA Rankin Holmes, Montana Water Trust; Chris Clancy FWP Fisheries Biologist, Mike McLane, FWP Water Resources Specialist

Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere

Date: January 28, 2010